

Listing of claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) An isolated nucleic acid molecule comprising a polynucleotide having a nucleotide sequence at least 95% identical to a sequence selected from the group consisting of:

- (a) a nucleotide sequence encoding a polypeptide comprising amino acids from about 1 to about 963 in SEQ ID NO:2;
- (b) a nucleotide sequence encoding a polypeptide comprising amino acids from about 2 to about 963 in SEQ ID NO:2;
- (c) a nucleotide sequence encoding a polypeptide comprising amino acids from about 48 to about 963 in SEQ ID NO:2;
- (d) a nucleotide sequence encoding the mature TR16-long polypeptide having the amino acid sequence encoded by a cDNA ~~HTWBD48 clone~~ contained in ATCC Deposit No. PTA-506;
- (e) a nucleotide sequence encoding the mature TR16-short polypeptide having the amino acid sequence encoded by a cDNA ~~clone~~ HLICS62 contained in ATCC Deposit No. PTA-506;
- (f) a nucleotide sequence encoding the TR16 extracellular domain;
- (g) a nucleotide sequence encoding the TR16 transmembrane domain;
- (h) a nucleotide sequence encoding the TR16 intracellular domain comprising amino acids from about 949 to about 1027 in SEQ ID NO:4;
- (i) a nucleotide sequence encoding the TR16 intracellular domain comprising amino acids from about 949 to about 963 in SEQ ID NO:2;
- (j) a nucleotide sequence encoding the TR16-long receptor extracellular and intracellular domains with all or part of the transmembrane domain deleted;
- (k) a nucleotide sequence encoding the TR16-short receptor extracellular and intracellular domains with all or part of the transmembrane

domain deleted:

- (j ~~l~~) a nucleotide sequence encoding the TR16 cysteine-rich domain;
- (~~k~~ m) a nucleotide sequence encoding a polypeptide comprising amino acids from about 1 to about 1027 in SEQ ID NO:4;
- (~~l~~ n) a nucleotide sequence encoding a polypeptide comprising amino acids from about 2 to about 1027 in SEQ ID NO:4;
- (~~m~~ o) a nucleotide sequence encoding a polypeptide comprising amino acids from about 48 to about 1027 in SEQ ID NO:4; and
- (~~n~~ p) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), ~~or~~ (m), (n) or (o).

2-4. (Cancelled)

5. (Original) The nucleic acid molecule of claim 1, wherein said polynucleotide has the complete nucleotide sequence of a cDNA clone contained in ATCC Deposit No. PTA-506.

6. (Original) The nucleic acid molecule of claim 1, wherein said polynucleotide has the nucleotide sequence encoding the TR16 receptor having the amino acid sequence encoded by a cDNA clone contained in ATCC Deposit No. PTA-506.

7. (Original) The nucleic acid molecule of claim 1, wherein said polynucleotide has the nucleotide sequence encoding the mature TR16 receptor having the amino acid sequence encoded by a cDNA clone contained in ATCC Deposit No. PTA-506.

8. (Currently amended) An isolated nucleic acid molecule comprising a polynucleotide which hybridizes under stringent hybridization conditions to a polynucleotide having a nucleotide sequence identical to a nucleotide sequence in (a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), (m), ~~or~~ (n), (o) or (p) of claim 1, wherein said polynucleotide which hybridizes does not hybridize under stringent hybridization conditions to a polynucleotide having a nucleotide sequence consisting of only A residues or of only T residues.

9. (Currently amended) An isolated nucleic acid molecule comprising a polynucleotide which encodes the amino acid sequence of an epitope-bearing portion comprising at least 10 amino acid residues of a TR16 receptor having an amino acid sequence in (a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), ~~or~~ (m), (n) or (o) of claim 1.

10. (Cancelled)

11. (Original) The isolated nucleic acid molecule of claim 1, which encodes the TR16 receptor extracellular domain.

12. (Original) The isolated nucleic acid molecule of claim 1, which encodes the TR16 receptor transmembrane domain.

13. (Currently amended) The isolated nucleic acid molecule of claim 1, which encodes the TR16-long receptor intracellular domain.

14. (Original) A method for making a recombinant vector comprising inserting an isolated nucleic acid molecule of claim 1 into a vector.

15. (Original) A recombinant vector produced by the method of claim 14.

16. (Original) A method of making a recombinant host cell comprising introducing the recombinant vector of claim 15 into a host cell.

17. (Original) A recombinant host cell produced by the method of claim 16.

18. (Original) A recombinant method for producing a TR16 polypeptide, comprising culturing the recombinant host cell of claim 17 under conditions such that said polypeptide is expressed, and recovering said polypeptide.

19. (Currently amended) An isolated nucleic acid molecule comprising a polynucleotide having a sequence at least 95% identical to a sequence selected from the group consisting of:

(a) the nucleotide sequence contained in ATCC Deposit No. PTA-506 encoding the TR16-long polypeptide of clone HTWBD48;

(b) the nucleotide sequence contained in ATCC Deposit No. PTA-506 encoding the TR16-short polypeptide of clone HLICS62; and

- (c) a nucleotide sequence complementary to any of the nucleotide sequences in (a), or (b), above.

20-26. (Cancelled)

27. (Currently amended) An isolated nucleic acid molecule comprising a polynucleotide encoding a TR16 receptor polypeptide wherein, ~~except for at least one conservative amino acid substitution~~, said polypeptide has a sequence at least 95% identical to a sequence selected from the group consisting of:

- (a) a nucleotide sequence encoding a polypeptide comprising amino acids from about 1 to about 963 in SEQ ID NO:2;
- (b) a nucleotide sequence encoding a polypeptide comprising amino acids from about 2 to about 963 in SEQ ID NO:2;
- (c) a nucleotide sequence encoding a polypeptide comprising amino acids from about 48 to about 963 in SEQ ID NO:2;
- (d) a nucleotide sequence encoding the mature TR16-long polypeptide having the amino acid sequence encoded by a cDNA clone HTWBD48 contained in ATCC Deposit No. PTA-506;
- (e) a nucleotide sequence encoding the mature TR16-short polypeptide having the amino acid sequence encoded by ~~the~~ a cDNA clone contained in ATCC Deposit No. PTA-506;
- (f) a nucleotide sequence encoding the TR16 extracellular domain;
- (g) a nucleotide sequence encoding the TR16 transmembrane domain;
- (h) a nucleotide sequence encoding the TR16 intracellular domain comprising amino acids from about 949 to about 1027 in SEQ ID NO:4;
- (i) a nucleotide sequence encoding the TR16 intracellular domain comprising amino acids from about 949 to about 963 in SEQ ID NO:2;
- (j) a nucleotide sequence encoding the TR16-long receptor extracellular and intracellular domains with all or part of the transmembrane domain deleted;
- (k) a nucleotide sequence encoding the TR16-short receptor extracellular and intracellular domains with all or part of the transmembrane

domain deleted;

- (j ~~l~~) a nucleotide sequence encoding the TR16 cysteine-rich domain;
- (~~k~~ m) a nucleotide sequence encoding a polypeptide comprising amino acids from about 1 to about 1027 in SEQ ID NO:4;
- (~~l~~ n) a nucleotide sequence encoding a polypeptide comprising amino acids from about 2 to about 1027 in SEQ ID NO:4;
- (~~m~~ o) a nucleotide sequence encoding a polypeptide comprising amino acids from about 48 to about 1027 in SEQ ID NO:4; and
- (~~n~~ p) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), ~~or~~ (m), (n) or (o).

28. (Cancelled)

29. (Previously presented) An isolated nucleic acid molecule comprising a polynucleotide encoding a first amino acid sequence at least 95% identical to a second amino acid sequence selected from the group consisting of:

- (a) amino acids from about 1 to about 963 in SEQ ID NO:2;
- (b) amino acids from about 2 to about 963 in SEQ ID NO:2;
- (c) amino acids from about 48 to about 963 in SEQ ID NO:2;
- (d) amino acids from about 1 to about 1027 in SEQ ID NO:4;
- (e) amino acids from about 2 to about 1027 in SEQ ID NO:4; and
- (f) amino acids from about 48 to about 1027 in SEQ ID NO:4.

30. (Previously presented) The isolated nucleic acid molecule of claim 29, wherein said first amino acid sequence is at least 95% identical to (a).

31. (Previously presented) The isolated nucleic acid molecule of claim 30, wherein said first amino acid sequence is (a).

32. (Previously presented) The isolated nucleic acid molecule of claim 31, which comprises nucleotides 1 to 2889 of SEQ ID NO:1.

33. (Previously presented) The isolated nucleic acid molecule of claim 29, wherein said first amino acid sequence is at least 95% identical to (b).

34. (Previously presented) The isolated nucleic acid molecule of claim 33,

wherein said first amino acid sequence is (b).

35. (Previously presented) The isolated nucleic acid molecule of claim 34, which comprises nucleotides 4 to 2889 of SEQ ID NO:1.

36. (Previously presented) The isolated nucleic acid molecule of claim 29, wherein said first amino acid sequence is at least 95% identical to (c).

37. (Previously presented) The isolated nucleic acid molecule of claim 36, wherein said first amino acid sequence is (c).

38. (Previously presented) The isolated nucleic acid molecule of claim 37, which comprises nucleotides 142 to 2889 of SEQ ID NO:1.

39. (Previously presented) The isolated nucleic acid molecule of claim 29, wherein said first amino acid sequence is at least 95% identical to (d).

40. (Previously presented) The isolated nucleic acid molecule of claim 39, wherein said first amino acid sequence is (d).

41. (Previously presented) The isolated nucleic acid molecule of claim 40, which comprises nucleotides 1 to 3081 of SEQ ID NO:3.

42. (Previously presented) The isolated nucleic acid molecule of claim 29, wherein said first amino acid sequence is at least 95% identical to (e).

43. (Previously presented) The isolated nucleic acid molecule of claim 42, wherein said first amino acid sequence is (e).

44. (Previously presented) The isolated nucleic acid molecule of claim 43, which comprises nucleotides 4 to 3081 of SEQ ID NO:3.

45. (Previously presented) The isolated nucleic acid molecule of claim 29, wherein said first amino acid sequence is at least 95% identical to (f).

46. (Previously presented) The isolated nucleic acid molecule of claim 45, wherein said first amino acid sequence is (f).

47. (Previously presented) The isolated nucleic acid molecule of claim 46, which comprises nucleotides 142 to 3081 of SEQ ID NO:3.

48. (Previously presented) An isolated nucleic acid molecule complementary to

the isolated nucleic acid molecule of claim 29.

49. (Previously presented) The isolated nucleic acid molecule of claim 29, wherein said nucleic acid is DNA.

50. (Previously presented) The isolated nucleic acid molecule of claim 29, wherein said nucleic acid is RNA.

51. (Previously presented) The isolated nucleic acid molecule of claim 29, wherein said nucleic acid is double-stranded.

52. (Previously presented) The isolated nucleic acid molecule of claim 29, wherein said nucleic acid is single-stranded.

53. (Previously presented) A composition comprising the nucleic acid molecule of claim 29 and a carrier.

54. (Previously presented) The isolated nucleic acid molecule of claim 29 wherein the nucleic acid molecule further comprises a heterologous polynucleotide sequence.

55. (Previously presented) The isolated nucleic acid molecule of claim 54, wherein said heterologous polynucleotide sequence encodes a heterologous polypeptide.

56. (Previously presented) The isolated nucleic acid molecule of claim 55, wherein said heterologous polypeptide is a human IgG Fc region.

57. (Previously presented) A recombinant vector comprising the isolated nucleic acid molecule of claim 29.

58. (Previously presented) The recombinant vector of claim 57 wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

59. (Previously presented) A recombinant host cell comprising the isolated nucleic acid molecule of claim 29.

60. (Previously presented) The recombinant host cell of claim 59 wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

61. (Previously presented) A method for producing a polypeptide comprising an amino acid sequence selected from the group consisting of:

- (a) amino acids from about 1 to about 963 in SEQ ID NO:2;
- (b) amino acids from about 2 to about 963 in SEQ ID NO:2;
- (c) amino acids from about 48 to about 963 in SEQ ID NO:2;
- (d) amino acids from about 1 to about 1027 in SEQ ID NO:4;
- (e) amino acids from about 2 to about 1027 in SEQ ID NO:4; and
- (f) amino acids from about 48 to about 1027 in SEQ ID NO:4;

comprising culturing a host cell comprising the nucleic acid molecule of claim 29 under conditions suitable to produce the polypeptide of (a), (b), (c), (d), (e) or (f), and recovering the polypeptide of (a), (b), (c), (d), (e) or (f).

62. (Currently amended) An isolated nucleic acid molecule comprising a polynucleotide encoding a first amino acid sequence at least 95% identical to a second amino acid sequence selected from the group consisting of:

- (a) the amino acid sequence of the full-length TR16-long polypeptide encoded by ~~the~~-a cDNA ~~HTWBD48-clone~~ contained in ATCC Deposit No. PTA-506;
- (b) the amino acid sequence of the full-length TR16-long polypeptide encoded by ~~the~~-a cDNA ~~HTWBD48-clone~~ contained in ATCC Deposit No. PTA-506, excluding the N-terminal methionine residue;
- (c) the amino acid sequence of the mature TR16-long polypeptide encoded by ~~the~~-a cDNA ~~HTWBD48-clone~~ contained in ATCC Deposit No. PTA-506;
- (d) the amino acid sequence of the full-length TR16-short polypeptide encoded by ~~the~~-a cDNA ~~HLICS62-clone~~ contained in ATCC Deposit No. PTA-506;
- (e) the amino acid sequence of the full-length TR16-short polypeptide encoded by ~~the~~-a cDNA ~~HLICS62-clone~~ contained in ATCC Deposit No. PTA-506, excluding the N-terminal methionine residue; and
- (f) the amino acid sequence of the mature TR16-short polypeptide encoded by ~~the~~-a cDNA ~~HLICS62-clone~~ contained in ATCC Deposit No. PTA-506.

63. (Previously presented) The isolated nucleic acid molecule of claim 62, wherein said first amino acid sequence is at least 95% identical to (a).

64. (Previously presented) The isolated nucleic acid molecule of claim 63, wherein said first amino acid sequence is (a).

65. (Previously presented) The isolated nucleic acid molecule of claim 62, wherein said first amino acid sequence is at least 95% identical to (b).

66. (Previously presented) The isolated nucleic acid molecule of claim 65, wherein said first amino acid sequence is (b).

67. (Previously presented) The isolated nucleic acid molecule of claim 62, wherein said first amino acid sequence is at least 95% identical to (c).

68. (Previously presented) The isolated nucleic acid molecule of claim 67, wherein said first amino acid sequence is (c).

69. (Previously presented) The isolated nucleic acid molecule of claim 62, wherein said first amino acid sequence is at least 95% identical to (d).

70. (Previously presented) The isolated nucleic acid molecule of claim 69, wherein said first amino acid sequence is (d).

71. (Previously presented) The isolated nucleic acid molecule of claim 62, wherein said first amino acid sequence is at least 95% identical to (e).

72. (Previously presented) The isolated nucleic acid molecule of claim 71, wherein said first amino acid sequence is (e).

73. (Previously presented) The isolated nucleic acid molecule of claim 62, wherein said first amino acid sequence is at least 95% identical to (f).

74. (Previously presented) The isolated nucleic acid molecule of claim 73, wherein said first amino acid sequence is (f).

75. (Previously presented) An isolated nucleic acid molecule complementary to the isolated nucleic acid molecule of claim 62.

76. (Previously presented) The isolated nucleic acid molecule of claim 62, wherein said nucleic acid is DNA.

77. (Previously presented) The isolated nucleic acid molecule of claim 62, wherein said nucleic acid is RNA.

78. (Previously presented) The isolated nucleic acid molecule of claim 62, wherein said nucleic acid is double-stranded.

79. (Previously presented) The isolated nucleic acid molecule of claim 62, wherein said nucleic acid is single-stranded.

80. (Previously presented) A composition comprising the nucleic acid molecule of claim 62 and a carrier.

81. (Previously presented) The isolated nucleic acid molecule of claim 62 wherein the nucleic acid molecule further comprises a heterologous polynucleotide sequence.

82. (Previously presented) The isolated nucleic acid molecule of claim 81, wherein said heterologous polynucleotide sequence encodes a heterologous polypeptide.

83. (Previously presented) The isolated nucleic acid molecule of claim 82, wherein said heterologous polypeptide is a human IgG Fc region.

84. (Previously presented) A recombinant vector comprising the isolated nucleic acid molecule of claim 62.

85. (Previously presented) The recombinant vector of claim 84 wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

86. (Previously presented) A recombinant host cell comprising the isolated nucleic acid molecule of claim 62.

87. (Previously presented) The recombinant host cell of claim 86 wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

88. (Currently amended) A method for producing a polypeptide comprising an amino acid sequence selected from the group consisting of:

(a) the amino acid sequence of the full-length TR16-long polypeptide

encoded by ~~the~~a cDNA ~~HTWBD48-clone~~ contained in ATCC Deposit No. PTA-506;

- (b) the amino acid sequence of the full-length TR16-long polypeptide encoded by ~~the~~a cDNA ~~HTWBD48-clone~~ contained in ATCC Deposit No. PTA-506, excluding the N-terminal methionine residue;
- (c) the amino acid sequence of the mature TR16-long polypeptide encoded by ~~the~~a cDNA ~~HTWBD48-clone~~ contained in ATCC Deposit No. PTA-506;
- (d) the amino acid sequence of the full-length TR16-short polypeptide encoded by ~~the~~a cDNA ~~HLICS62-clone~~ contained in ATCC Deposit No. PTA-506;
- (e) the amino acid sequence of the full-length TR16-short polypeptide encoded by ~~the~~a cDNA ~~HLICS62-clone~~ contained in ATCC Deposit No. PTA-506, excluding the N-terminal methionine residue; and
- (f) the amino acid sequence of the mature TR16-short polypeptide encoded by ~~the~~a cDNA ~~HLICS62-clone~~ contained in ATCC Deposit No. PTA-506;

comprising culturing a host cell comprising the nucleic acid molecule of claim 62 under conditions suitable to produce the polypeptide of (a), (b), (c), (d), (e) or (f) and recovering the polypeptide of (a), (b), (c), (d), (e) or (f).